

1656

PATENT

Case Docket No. GNE.2930R1C3

Date: May 14, 2002



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Botstein et al.
Appl. No. : 10/032,996
Filed : December 27, 2001
For : SECRETED AND
TRANSMEMBRANE
POLYPEPTIDES AND
NUCLEIC ACIDS ENCODING
THE SAME
Examiner : Unknown
Group Art Unit : 1656

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May 14, 2002
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AnneMarie Kaiser, Reg. No. 37,649

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ATTENTION: APPLICATION BRANCH

Dear Sir:

Enclosed for filing in the above-identified application are:

- (X) An Information Disclosure Statement.
- (X) A PTO Form 1449 with fifty-six (56) references.
- (X) The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 11-1410.
- (X) Return prepaid postcard.

AnneMarie Kaiser
Registration No. 37,649
Attorney of Record

GNE.2930R1C3



PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE

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INFORMATION DISCLOSURE STATEMENT

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Dear Sir:

Enclosed is form PTO-1449 listing references that are also enclosed. This Information Disclosure Statement is being filed before the receipt of a first Office Action on the merits, and presumably no fee is required in accordance with 37 C.F.R. § 1.97(b)(3). If a first Office Action on the merits was mailed before the mailing date of this Statement, the Commissioner is authorized to charge the fee set forth in 37 C.F.R. § 1.17(p) to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: May 14, 2002

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FORM PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICEATTY. DOCKET NO.
GNE.2930R1C3APPLICATION NO.
10/032,996INFORMATION DISCLOSURE STATEMENT
BY APPLICANT

(USE SEVERAL SHEETS IF NECESSARY)

APPLICANT
Botstein et al.FILING DATE
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(IF APPROPRIATE)

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
	1. 5,536,637	07/16/96	Jacobs			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
						YES NO

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OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)

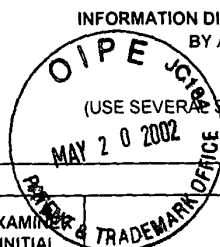
	2.	Akimaru et al. (1997) Drosophila CBP is a co-activator of cubitus interruptus in hedgehog signalling. <i>Nature</i> . 386:735-738.
	3.	Alcedo et al. (1996) The drosophila smoothened gene encodes a seven-pass membrane protein, a putative receptor for the hedgehog signal. <i>Cell</i> . 86:221-232.
	4.	Alexandre et al. (1996) Transcriptional activation of hedgehog target genes in drosophila is mediated directly by the cubitus interruptus protein, a member of the GLI family of zinc finger DNA-binding proteins. <i>Genes & Development</i> . 10:2003-2013.
	5.	Apelqvist et al. (1997) Sonic hedgehog directs specialised mesoderm differentiation in the intestine and pancreas. <i>Current Biology</i> . 7:801-804.
	6.	Bellusci et al. (1997) Involvement of sonic hedgehog (Shh) in mouse embryonic lung growth and morphogenesis. <i>Development</i> . 124:53-63.
	7.	Bitgood et al. (1996) Sertoli cell signaling by desert hedgehog regulates the male germline. <i>Current Biology</i> . 6(3):298-304.
	8.	Busson et al. (1988) Genetic analysis of viable and lethal fused mutants of drosophila melanogaster. <i>Roux's Arch. Dev. Biol.</i> 197:221-230.
	9.	Chen et al. (1996) Dual roles for patched in sequestering and transducing hedgehog. <i>Cell</i> . 87:553-563.
	10.	Chiang et al. (1996) Cyclopia and defective axial patterning in mice lacking sonic hedgehog gene function. <i>Nature</i> . 383:407-413.
	11.	Chidambaram et al. (1996) Mutations in the human homologue of the Drosophila patched gene in Caucasian and African-American nevoid basal cell carcinoma syndrome patients. <i>Cancer Research</i> . 56:4599-4601.
	12.	Dominguez et al. (1996) Sending and receiving the hedgehog signal: control by the drosophila Gli protein cubitus interruptus. <i>Science</i> . 272:1621-1625.
	13.	Echelard et al. (1993) Sonic hedgehog, a member of a family of putative signaling molecules, is implicated in the regulation of CNS polarity. <i>Cell</i> . 75:1417-1430.
	14.	Ericson et al. (1995) Sonic hedgehog induces the differentiation of ventral forebrain neurons: a common signal for ventral patterning within the neural tube. <i>Cell</i> . 81:747-756.
	15.	Fan and Tessler-Lavigne (1994) Patterning of mammalian somites by surface ectoderm and notochord: evidence for sclerotome induction by a hedgehog homolog. <i>Cell</i> . 79:1175-1186.
	16.	Gailani et al. (1996) The role of the human homologue of drosophila patched in sporadic basal cell carcinomas. <i>Nature Genetics</i> . 14:78-81.
	17.	Grau and Simpson (1987) The segment polarity gene costal-2 in drosophila. <i>Developmental Biology</i> . 122:186-200.
	18.	Hahn et al. (1996) Mutations of the human homolog of drosophila patched in the nevoid basal cell carcinoma syndrome. <i>Cell</i> . 85:841-851.
	19.	Hooper and Scott (1989) The drosophila patched gene encodes a putative membrane protein required for segmental patterning. <i>Cell</i> . 59:751-765.

EXAMINER

DATE CONSIDERED

*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. GNE.2930R1C3	APPLICATION NO. 10/032,996
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE SEVERAL SHEETS IF NECESSARY)		APPLICANT Botstein et al.	
		FILING DATE December 27, 2001	GROUP 1656



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EXAMINER INITIAL	OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
	20. Hynes et al. (1995) Induction of midbrain dopaminergic neurons by sonic hedgehog. <i>Neuron</i> . 15:35-44.
	21. Hynes et al. (1997) Control of cell pattern in the neural tube by the zinc finger transcription factor and oncogene Gli-1. <i>Neuron</i> . 19:15-26.
	22. Ingham (1995) Signalling by hedgehog family proteins in drosophila and vertebrate development. <i>Current Opinion in Genetics and Development</i> . 5:492-498.
	23. Jiang and Struhl (1998) Regulation of the hedgehog and wingless signalling pathways by the F-box/WD40-repeat protein Slimb. <i>Nature</i> . 391:493-496.
	24. Johnson et al. (1994) Ectopic expression of sonic hedgehog alters dorsal-ventral patterning of somites. <i>Cell</i> . 79:1165-1173.
	25. Johnson et al. (1996) Human homolog of patched, a candidate gene for the basal cell nevus syndrome. <i>Science</i> . 272:1668-1671.
	26. Klein et al. (1996) Selection for genes encoding secreted proteins and receptors. <i>Proc. Natl. Acad. Sci. USA</i> . 93:7108-7113.
	27. Krauss et al. (1993) A functionally conserved homolog of the drosophila segment polarity gene hh is expressed in tissues with polarizing activity in zebrafish embryos. <i>Cell</i> . 75:1431-1444.
	28. Krishnan et al. (1997) Mediation of sonic hedgehog-induced expression of COUP-TFII by a protein phosphatase. <i>Science</i> . 278:1947-1950.
	29. Laufer et al. (1994) Sonic hedgehog and Fgf-4 act through a signaling cascade and feedback loop to integrate growth and patterning of the developing limb bud. <i>Cell</i> . 79:993-1003.
	30. Lee et al. (1997) Gli1 is a target of sonic hedgehog that induces ventral neural tube development. <i>Development</i> . 124:2537-2552.
	31. Marigo et al. (1996) Biochemical evidence that patched is the hedgehog receptor. <i>Nature</i> . 384:176-179.
	32. Marti et al. (1995) Requirement of 19K form of sonic hedgehog for induction of distinct ventral cell types in CNS explants. <i>Nature</i> . 375:322-325.
	33. Nakano et al. (1989) A protein with several possible membrane-spanning domains encoded by the drosophila segment polarity gene patched. <i>Nature</i> . 341:508-513.
	34. Nüsslein-Volhard et al. (1984) Mutations affecting the pattern of the larval cuticle in drosophila melanogaster. <i>Roux's Arch. Dev. Biol.</i> 193:267-282.
	35. Orenic et al. (1990) Cloning and characterization of the segment polarity gene cubitus interruptus dominant of drosophila. <i>Genes & Development</i> . 4:1053-1067.
	36. Oro et al. (1997) Basal cell carcinomas in mice overexpressing sonic hedgehog. <i>Science</i> . 276:817-821.
	37. Perrimon (1995) Hedgehog and beyond. <i>Cell</i> . 80:517-520.
	38. Pham et al. (1995) The suppressor of fused gene encodes a novel PEST protein involved in drosophila segment polarity establishment. <i>Genetics</i> . 140:587-598.
	39. Pr��at et al. (1990) A putative serine/threonine protein kinase encoded by the segment-polarity fused gene of drosophila. <i>Nature</i> . 347:87-89.
	40. Pr��at (1992) Characterization of suppressor of fused, a complete suppressor of the fused segment polarity gene of drosophila melanogaster. <i>Genetics</i> . 132:725-736.
	41. Pr��at et al. (1993) Segmental polarity in drosophila melanogaster: genetic dissection of fused in a suppressor of fused background reveals interaction with costal-2. <i>Genetics</i> . 135:1047-1062.
	42. Riddle et al. (1993) Sonic hedgehog mediates the polarizing activity of the ZPA. <i>Cell</i> . 75:1401-1416.
	43. Roberts et al. (1995) Sonic hedgehog is an endodermal signal inducing Bmp-4 and Hox genes during induction and regionalization of the chick hindgut. <i>Development</i> . 121:3163-3174.
	44. Robbins et al. (1997) Hedgehog elicits signal transduction by means of a large complex containing the kinesin-related protein costal2. <i>Cell</i> . 90:225-234.
	45. Roelink et al. (1995) Floor plate and motor neuron induction by different concentrations of the amino-terminal cleavage product of sonic hedgehog autoproteolysis. <i>Cell</i> . 81:445-455.
	46. Simpson and Grau (1987) The segment polarity gene costal-2 in drosophila. <i>Developmental Biology</i> . 122:201-209.
	47. Sisson et al. (1997) Costal2, a novel kinesin-related protein in the hedgehog signaling pathway. <i>Cell</i> . 90:235-245.

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	48.	Stone et al. (1996) The tumour-suppressor gene patched encodes a candidate receptor for sonic hedgehog. <i>Nature</i> . 384:129-134.
	49.	Thérond et al. (1996) Functional domains of fused, a serine-threonine kinase required for signaling in drosophila. <i>Genetics</i> . 142:1181-1198.
	50.	Thérond et al. (1996) Phosphorylation of the fused protein kinase in response to signaling from hedgehog. <i>Proc. Natl. Acad. Sci. USA</i> . 93:4224-4228.
	51.	Uden et al. (1996) Mutations in the human homologue of drosophila patched (PTCH) in basal cell carcinomas and the gorlin syndrome: different in vivo mechanisms of PTCH inactivation. <i>Cancer Research</i> . 56:4562-4565.
	52.	Van den Heuvel and Ingham (1996) Smoothed encodes a receptor-like serpentine protein required for hedgehog signalling. <i>Nature</i> . 382:547-551.
	53.	Wicking et al. (1997) Most germ-line mutations in the nevoid basal cell carcinoma syndrome lead to a premature termination of the PATCHED protein, and no genotype-phenotype correlations are evident. <i>Am. J. Hum. Genet.</i> 60:21-26.
	54.	Xie et al. (1998) Activating smoothed mutations in sporadic basal-cell carcinoma. <i>Nature</i> . 391:90-92.
	55.	Database search, Locus list: hum (349, 801 seqs, 66, 964, 548 aa), Mon Jan 7 16:12:49 2002 [BLASTP 2.2.1 [Jul-12-2001], NCBI] 2 pp.
	56.	Database search, Locus list: hum - est (1, 803, 435 seqs, 6, 559, 376, 613 bp), Tue Jan 8 09:15:52 2002 [BLASTN 2.2.1 [Jul-12-2001], NCBI] 8 pp.

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